



Attorney Docket No.: NCR 9792

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Paul L. Sinclair, et al.

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Group Art No. **2177**

Serial No.: **09/981,613**

Examiner: **Linh Black**

Filed: **10/16/2001**

For: **Partitioned Database System**

Attorney Docket No.: **9792**

Honorable Commissioner for Patents

Washington, D.C. 20231

Attention: Board of Patent Appeals and Interferences

DRAFT

Dear Sir:

APPELLANT'S BRIEF (37 C.F.R. § 1.192)

This brief is submitted in support of appellants' notice of appeal from the decision dated December 28, 2004 of the Examiner.

This brief is transmitted in triplicate per 37 C.F.R. § 1.192.

I. IDENTIFICATION OF THE REAL PARTY OF INTEREST

The real party in interest is:

NCR Corporation
1700 S. Patterson Blvd
Dayton, Ohio 45479

by virtue of an assignment by the inventors as duly recorded in the Assignment Branch of the U.S. Patent and Trademark Office.

II. IDENTIFICATION OF RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences, to Applicants' knowledge.

III. STATUS OF ALL THE CLAIMS, PENDING OR CANCELLED, AND IDENTIFYING THE CLAIMS APPEALED

The application as originally filed contained 37 claims. Claims 7, 9-11, 13, and 14 are pending. Claim 14 is appealed.

IV. STATUS OF ANY AMENDMENT FILED SUBSEQUENT TO FINAL REJECTION

Applicant filed an amendment canceling claims 7, 9-11, and 13 and adding claims 38-40, each dependent on claim 14. That amendment has not been entered.

V. SUMMARY OF THE INVENTION

Applicant's invention is a partitioned database system in which table rows are stored in a plurality of storage facilities. For each row in a plurality of rows, there is a corresponding row identifier. The row identifier includes at least a first value and a second value that have relationships to the data in the row. The row identifiers are used to determine the logical order in which the rows of a particular table are stored on a particular storage facility with the first value predominately setting the order and the second value determining the order of rows with identical first values. Furthermore, the second value of the row identifier is used to determine the storage facility on which a particular row is stored.

Organizing rows both with respect to the storage facilities and with respect to the order on the storage facilities improves the performance and efficiency of the partitioned database system. Efficiency is gained by controlling the distribution of rows to the storage facilities. Performance is gained by controlling the ordering of rows in particular storage facilities according to a related value.

VI. CONCISE STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

The examiner rejected claim 14 under 35 USC 103(a) over Kruglikov et al. (United States Patent Number 6,105,026) in view of Tow et al. (United States Patent Number 5,860,070).

The examiner argued that “it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Kruglikov’s teaching with Tow’s teaching of multi-column key associated with hash values in order to provide an efficient locking mechanism in managing and distribution the data records among the storage facilities.” *See* page 6 of the Final Office Action. Applicant disagrees that Kruglikov or Tow teaches or suggests that rows should be distributed among a plurality of storage facilities based on a value within the key that is used to order rows from a particular table on a particular storage facility.

VII. GROUPING OF CLAIMS

Claim 14 is the only claim appealed.

VIII. ARGUMENTS OF THE APPELLANT, WITH EACH ISSUE IN SEPARATE HEADINGS, WITH RESPECT TO EACH ISSUE PRESENTED FOR REVIEW

- A. The subject matter of claim 14 would not have been obvious over Kruglikov in view of Tow because neither reference discloses or suggests distributing rows to a plurality of storage facilities according to a value that is combined with another, predominate value to order table rows on each storage facility.**

In the Final Office Action in this matter, the examiner rejected claim 14, together with claim 13, under 35 USC 103(a) over Kruglikov et al. (United States Patent Number 6,105,026) in view of Tow et al. (United States Patent Number 5,860,070). Claim 14 requires, in pertinent part, that “table rows in each storage facility that correspond to a specific table are logically ordered according to a row identifier (row ID)”; that “the row ID comprises a first value based on one or more columns of the table and a second value based on one or more columns of the table” where “the first value of the row ID is predominate in determining the order of the rows in the storage facilities”; and that “table rows are distributed among the plurality of storage facilities based on the second value.”

In the rejection of claim 14, the examiner asserted that Kruglikov taught storage facilities including table rows, *see* page 5 of the Final Office Action, but did not assert that Kruglikov taught a manner of distributing rows among the facilities. The Tow reference has no teaching regarding whether rows are distributed across multiple facilities and the examiner does not assert that it does. Instead, the examiner generally asserts that it would have been “obvious” to

combine the references to “provide an efficient locking mechanism in managing and distribution the data records among the storage facilities.” See page 5 of the Final Office Action. It is unclear from the reference if the examiner is even asserting that the combination of references teaches distribution based on the second value of a row identifier. Without that teaching, there is no basis for an obviousness rejection to claim 14 or any claim dependent therefrom. See *In re Thrift*, 298 F.3d 1357, 1365-66 (Fed. Cir. 2002). Any assertion that the claimed row distribution is taught by the combination of Kruglikov and Tow would be an exercise in impermissible hindsight where neither reference mentions or suggests such a system.

Summary

The rejection of claim 14 should be reversed because none of the cited references, alone or in combination, disclose the elements required by the claim.

Respectfully submitted,

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